

as *T. coulteri* A. Gray and as *Scrophularia parviflora* Woot. & Standl.

Citations: TEXAS: Travis Co.: Albers & Haskell 49278 (Au--262712); Warnock 45-14 (Au--1659311). Uvalde Co.: Shreve 9917 (F--photo of type, Mi--type, N--isotype, N--photo of type, Sg--photo of type, Z--photo of type). ARIZONA: Gila Co.: Collom s.n. [Barnhart Pass] (Mi).

ADDITIONAL NOTES ON THE GENUS *VITEX* XVIII

Harold N. Moldenke

VITEX Tourn.

Additional & emended bibliography: Sandm. in L., *Amoen. Acad.* 5: 380. 1759; Neck., *Elem. Bot.* 1: 353. 1790; Roxb., *Hort. Beng.*, imp. 1, 46 & [95]. 1814; Poir. in Lam., *Tabl. Encycl. Méth. Bot.* 3: pl. 541, fig. 1 & 2 (1819) and 3: 56. 1823; Loud., *Hort. Brit.*, ed. 1, 246 & 529 (1830) and ed. 2, 246 & 529. 1832; Roxb., *Fl. Ind.*, ed. 2, imp. 1, 3: 60--75. 1832; Blanco, *Fl. Filip.*, ed. 3, 513--517. 1837; G. Don in Loud., *Hort. Brit.*, ed. 3, 246 & 529. 1839; G. Don in Sweet, *Hort. Brit.*, ed. 3, 550--551. 1839; Endl., *Gen. Pl.* 2: 1501. 1841; A. L. Juss. in Orbigny, *Dict. Univ. Hist. Nat.* 13: 185. 1849; Miq., *Fl. Ind. Bat.* Suppl. 1: 95, 242, & 567--568. 1860; Peters, *Naturwiss. Reise Mossamb.* 6 (1): *Bot.* 256 & 265--266. 1861; Ulrich, *Internat. Wörterb.*, ed. 1, 254. 1871; Pritz., *Thes. Lit. Bot.*, imp. 1, 245. 1872; Brandis, *Forest Fl. Northw. Cent. India* 369--370 & 577. 1874; Firminger, *Man. Gard. India*, ed. 3, 326 & 620. 1874; Pfeiffer, *Nom. Bot.* 1 (2): 1592--1593 & 1836 (1874), 2 (1): 24 & 25 (1874), and 2 (2): 1569, 1570, 1593, & 1605. 1874; Roxb., *Fl. Ind.*, ed. 2, imp. 2, 481--483. 1874; Ulrich, *Internat. Wörterb.*, ed. 2, 254. 1875; Naves & Fern.-Villar in Blanco, *Fl. Filip.*, ed. 3, 6: pl. 226--228 & 427. 1878; Boiss., *Fl. Orient.*, imp. 1, 4: 535. 1879; Naves & Fern.-Villar in Blanco, *Fl. Filip.*, ed. 3, 4: 159--160. 1880; Franch., *Pl. David.*, imp. 1, 1: 232. 1884; Hillebrand, *Fl. Hawai. Isls.*, imp. 1, 340 & 342. 1888; Stahl, *Estud. Fl. Puerto Rico*, ed. 1, 3: 287, 296--297, & 371. 1888; Forbes & Hemsl., *Journ. Linn. Soc. Lond. Bot.* 26 [Ind. Fl. Sin. 2]: 257--259. 1890; Baill., *Hist. Pl.* 11: 85--88, 94, 95, 110, 112, & 116, fig. 93--96. 1891; J. C. Willis, *Dict. Flow. Pl.*, ed. 2, 604 & 608. 1903; Post & Kuntze, *Lexicon 589 & 688. 1904; J. C. Willis, Dict. Flow. Pl.*, ed. 3. imp. 1, 621 & 625. 1908; D. H. Scott in Solered., *Syst. Anat. Dicot.* [transl. Boodle & Fritsch] 2: 1021 & 1022. 1908; Stopes, *Cat. Mesoz. Pl.* 225. 1913; J. C. Willis, *Dict. Flow. Pl.*, ed. 3, imp. 2, 621 & 625. 1914; Thonner, *Flow. Pl. Afr.* 470. 1915; R. E. Fries, *Wiss. Ergebni. Schwed. Rhodes.-Kong. Exped. Bot.* 2 (2): 273--274. 1916; Saxton & Sedgwick, *Rec. Bot. Surv. India* 7: 291.

1918; E. D. Merr., Bibl. Enum. Born. Pl. 5: 513--515. 1921; J. C. Willis, Dict. Flow. Pl., ed. 5, 678 & 682. 1925; Thakar, Pl. Cutch. 223. 1926; E. D. Merr., Univ. Calif. Publ. Bot. 15: 263 & 264. 1927; Ewart, Fl. Vict. 973. 1930; Funke, Ann. Jard. Bot. Buitenz. 41: 55. 1930; Marloth, Fl. S. Afr. 3: 146. 1932; A. W. Hill, Ind. Kew. Suppl. 8: 119. 1933; Junell, Symb. Bot. Upsal 1 (4): 93--94, 98, 132, 199--200, & 205. 1934; Bally, Kew Bull. Misc. Inf. 1937: 24. 1937; Stahl, Estud. Fl. Puerto Rico, ed. 2, 3: 287, 296--297, & 371. 1937; Fletcher, Kew Bull. Misc. Inf. 1937: 74 & 75 (1937) and 1938: 401, 405--409, & 431--437. 1938; Chun, Sinensis 4: 268. 1940; Kosterm., Reinwardtia 1: 75--80, 82, 84--90, 92--97, 99, 100, 102--104, & 106. 1951; J. C. Willis, Dict. Flow. Pl., ed. 6, 678 & 682. 1951; Thakar, Fl. Baroda 585. 1952; Patel, Syst. List Trees 20. 1953; Bean in Chittenden, Dict. Gard. 4, imp. 1, 2249 & 2250. 1956; G. Taylor, Ind. Kew. Suppl. 12: 141 & 151. 1959; Duthie, Fl. Upper Gang. Pl., ed. 2, 2: 90. 1960; Turrill, Curtis Bot. Mag. 173: pl. 355 in textu. 1960; Santapau, Journ. Gujarat Res. Soc. 17: 39. 1962; Boiss., Fl. Orient., imp. 2, 4: 535. 1964; Imbesi, Ind. Piante 129 & 704--705. 1964; Puri, Jain, Mukerjee, Sarup, & Kotwal, Rec. Bot. Surv. India 19: 107. 1964; Banerji, Rec. Bot. Surv. India 19: 75. 1965; Bean in Chittenden, Dict. Gard., imp. 2, 4: 2245 & 2250. 1965; Airy Shaw in J. C. Willis, Dict. Flow. Pl., ed. 7, 32, 40, 205, 245, 408, 409, 654, 687, 770, 932, 944, 1148, 1173, 1176, 1184, & 1188. 1966; Chavan & Oza, Fl. Pavagadh 187. 1966; Santapau, Fl. Saurashtra 41. 1966; Stafleu, Tax. Lit. 355--356. 1967; Franch., Pl. David., imp. 2, 1: 232. 1970; Hatusima & Yoshinaga, Bull. Fac. Agr. Kagosh. Univ. 2: 93 & 109, pl. 15 (2 & 3). 1970; Patel, Forest Fl. Gujarat 25 & 230--231. 1971; Roxb., Fl. Ind., ed. 2, imp. 3, 481--483. 1971; Pritz., Thes. Lit. Bot., imp. 2, 245. 1972; Guinea Lopez & Ceballos Jimenez, Elenco Fl. Vasc. Espan. 202. 1974; Hocking, Excerpt. Bot. A.23: 290, 291, & 389. 1974; Vitokumar, Hindustani Times Feb. 17, p. 4. 1974; Srivastava, Fl. Gorak. 259. 1976; Cramer, Sri Lankan Forest., ser. 2, 13: 14. 1977; Ozenda, Fl. Sahara, ed. 2, 405--407. 1977; Ratter, Askew, Montgomery, & Gifford, Revist. Bras. Bot. 1: 51, 53, & 55. 1978; Dombrowski & Neto, Inform. Pesq. 3 (21): 80 & 81. 1979; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 385. 1979; Klein, Sellowia 31: 163. 1979; Kummrow, Bol. Mus. Bot. Munic. 38: 14. 1979; Li, Nan-fang 14, 100--103, & 168, fig. 29 & 30. 1979; Tans & Iltis, Trans. Wisc. Acad. Sci. 67: 79. 1979; Barcelo, Fl. Mallorca 4: [8]--10 & 33. 1980; Fosberg, Otobed, Sachet, Oliver, Powell, & Canfield, Vasc. Pl. Palau 38. 1980; Gentry, Phytologia 46: 209. 1980; Jayasuriya, Stud. Fl. Ecol. Ritig. 197--198. 1980; Liu & Yu, Act. Bot. Yunnan. 2: 455. 1980; Mold., Phytologia 46: 10--43, 57, 400, 464--494, 506, 510, & 512 (1980) and 47: 17, 18, 21, 22, 25, 28, 29, 31, 34, 38, 39, 41, & 42. 1980; Patunkar, Grasses Marathwada 10 & 297. 1980; Polunin, Fls. Greece Balk. 387 & 545. 1980; Rogerson & al., Bull. Torrey Bot. Club 107: 265. 1980; Roxb., Hort. Beng., imp. 2, 46 & [95]. 1980; Seymour, Phytol. Mem. 1: 246. 1980; Strid, Wild Fls. Mt. Olympus 4 & [5], pl. 2, fig. 2. 1980; Vogel, Seedl. Dicot. 92,

106, & 465. 1980; Wiggins, Fl. Baja Calif. 535, fig. 503. 1980; Duncan & Kortesz, Vasc. Fl. Ga. 111. 1981; Hillebrand, Fl. Haw. Isls., imp. 2 [Cramer, Repr. U. S. Floras 9:] 340 & 342. 1981; Hocking, Phytologia 47: 484. 1981; Hu, Enum. Chin. Mat. Med. 18, 45, 69, 72, & 219. 1981; Mold., Phytologia 47: 331, 336, 355, & 512 (1981) and 48: 123, 124, & 291. 1981; Thomas & Allen, Contrib. Herb. North. La. Univ. 2: 38 & 42. 1981.

Brooker & Cooper (1961) assert that "The chemical constituents of *Vitex* species have been listed by Cambie (1959). The most notable is vitexin. The heartwood contains beta sitosterol.... while beta carotene and p-hydroxyl benzoic acid occur in the leaves. The methyl ester of this last component has been patented as a germicide (Extra Pharmacopoeia p. 104)."

The Peters (1861) reference in the literature of this genus is dated "1862" in error by Pritzel (1872).

The Commonwealth Institute Index of Fungi (1972) lists the following fungi as attacking *Vitex*: *Cercospora agarwalii*, *Exosporium viticis*, *Hormisciomyces bellus*, *Irenopsis viticifolia*, *Linochora viticis*, *Massaria kamatii*, *Phyllosticta ragatensis*, and *Zeta viticifolia*.

It is well worth noting here that Post & Kuntze (1904) divided the genus *Vitex* as follows:

Sect. 1. *Lagondium* (Rumpf) Kuntze [*Lagondium* Rumpf, 1743, *Euagnus Schau.*, 1847]

Subsect. 1. *Mailelou* (Adans.) Kuntze [*Mailelou* Adans., 1763, *Agnus-castus* Endl., 1838, *Terminales* Briq., 1892]

Subsect. 2. *Limia* Endl. [*Axillares* Briq., 1892]

Subsect. 3. *Glomerovitex* Kuntze [*Glomerulosae* Briq., 1892]

Sect. 2. *Pyrostoma* (G. F. W. Mey.) Schau. [*Pyrostoma* G. F. W. Mey., 1818, *Casarettoa* Walp., 1844]

Sect. 3. *Chrysomallum* (Thouars) Schau.

Sect. 4. *Glossocalyx* C. B. Clarke

The S. G. Beck 1651, Keel S.33, Liesner & González 9451, Miranda 8471/26, and Silva 2820, distributed as *Vitex*, actually are not verbenaceous.

VITEX AGNUS-CASTUS L.

Additional synonymy: *Vitex argus-castus* Rawson, in herb.

Additional & emended bibliography: Poir. in Lam., Encycl. Méth. Bot. 3: pl. 541, fig. 1. 1819; Loud., Hort. Brit., ed. 1, 246. 1830; Sweet, Hort. Brit., ed. 2, 416. 1830; Loud., Hort. Brit., ed. 2, 246. 1832; G. Don in Loud., Hort. Brit., ed. 3, 246. 1839; G. Don in Sweet, Hort. Brit., ed. 3, 551. 1839; Ulrich, Internat. Wörterb., ed. 1, 254. 1871; Brandis, Forest Fl. N.W. Cent. India 370. 1874; Ulrich, Internat. Wörterb., ed. 2, 254. 1875; Baill., Hist. Pl. 11: 85--86 & 94, fig. 93--96. 1891; D. H. Scott in Solerd., Syst. Anat. Dicot. [transl. Boddle & Fritsch] 1: 631 & 634 (1908) and 2: 1022. 1908; Kosterm., Reinwardtia 1: 78, 79, 100, & 106. 1951; Bean in Chittenden, Dict. Gard., imp. 1, 4: 2249. 1956; Imbesi, Ind. Pianta 129 & 704--705. 1964; Bean in Chittenden, Dict. Gard., imp. 2, 4: 2249. 1965; Guinea Lopez & Ceballos Jimenez, Elenco Fl. Vasc. Espan. 202. 1974; Ozenda, Fl.

Sahara, ed. 2, [406] & 407, fig. 149. 1977; Holm, Pancho, Herberger, & Plucknett, Geogr. Atlas World Weeds 385. 1979; Barcelo, Fl. Mallorca 4: [8]--10. 1980; Mold., Phytologia 45: 479--480. 1980; Polunin, Fls. Greece Balk. 387. 1980; Strid, Wild Fls. My. Olympus 4, [5], & 298, pl. 2, fig. 2. 1980; Duncan & Kortesz, Vasc. Fl. Ga. 111. 1981; Thomas & Allen, Contrib. Herb. North. La. Univ. 2: 29 & 42. 1981.

Additional & emended illustrations: Poir. in Lam., Tabl. Encycl. Meth. Bot. 3: pl. 541, fig. 1, 1819; Baill., Hist. Pl. 11: 85, fig. 93--96. 1892; Ozenda, Fl. Sahara, ed. 2, [406], fig. 149. 1977; Barcelo, Fl. Mallorca 4: [8] & 33 (in color). 1980; Strid, Wild Fls. Mt. Olympus [5], pl. 2, fig. 2 (in color). 1980.

Butterwick & Lamb encountered this plant on a Texas floodplain and Fletcher found it growing along railroad tracks in Louisiana. The Hill collection, cited below, is from a plant cultivated in a Dioscorides garden and said to have been 6--8 feet tall with "lilac-purple" corollas. The Braley s.n. [3 Oct. 1968] and Wroten 646, cited below, bear no indications on their accompanying labels that they were gathered from cultivated plants, but I am assuming that they were. On the other hand, Thomas & al. 33417, collected in "lawn beside alley", may have been from cultivated material or possibly from naturalized ones.

Strid (1980) informs us that in the Mount Olympus area of Greece this species "forms a dense brush-wood on the dunes a short distance from the sea, often together with *Paliurus spina-christi*.

The Liogier 16870, distributed as typical *V. agnus-castus* L., actually represents *f.caerulea* (Rehd.) Mold., while Dooley 488, Hamlin s.n. [4-16-72], and P. White 175 & s.n. [3 July 1969] are *V. negundo* L.

Additional citations: MARYLAND: Montgomery Co.: Rawson s.n. [Silver Spring, July 1, 1969] (W--2010020). NORTH CAROLINA: Rockingham Co.: Leonard & Russ 2562 (Ne--33950). LOUISIANA: Caddo Par.: Overby 368 (Ne--115767). Caldwell Par.: Shell 127 (Ne--33944); Thomas, Marx, & al. 66421 (Ne--160982). Concordia Par.: Lindley & Lindley s.n. [23 May 1976] (Ne--123459). Franklin Par.: D. Dixon 3735 (Ne--176021); W. Fletcher 158 (Ne--152166). Ouachita Par.: P. Johnson s.n. [11/10/68] (Ne--13750); Scarbrough 749 (Ne--33947); Thomas & al. 33417 (Ne--65401). Winn Par.: P. W. Parker s.n. [17 July 1971] (Ne--33941). TEXAS: Cameron Co.: Crow s.n. [15 August 1969] (Ne--33951). Llano Co.: Butterwick & Lamb 2890 (Au). Van Zandt Co.: R. D. Thomas 25104 (Ne--66811). VIRGIN ISLANDS: St. Croix: Ørsted s.n. (N). CULTIVATED: District of Columbia: S. R. Hill 9708 (N). Florida: P. O. Schallert 365 (Go). Louisiana: Braley s.n. [3 Oct. 1968] (Ne--33946); Lieux 135 (Ne--33945); Wroten 646 (Ne--33948). Texas: Bratz s.n. [Elkhart, 8/30/61] (N).

VITEX AGNUS-CASTUS f. ALBA (West.) Rehd.

Additional synonymy: *Vitex agnus-castus* var. *albiflorus* Palau-Ferrer ex Barcelo, Fl. Mallorca 4: 9. 1980.

Additional & emended bibliography: Bean in Chittenden, Dict. Gard., imp. 1, 4: 2249 (1956) and imp. 2, 4: 2249. 1965; Mold., Phytologia 44: 340--341. 1979; Barcelo, Fl. Mallorca 4: 9. 1980;

Mold., *Phytol. Mem.* 2: 24, 54, 195, 197, 198, 255, 366, 456, 457, & 588. 1980.

Barcelo (1980) reports this form of the species from Majorca.

VITEX AGNUS-CASTUS f. *CAERULEA* (Rehd.) Mold.

Additional bibliography: Mold., *Phytologia* 44: 341. 1979; Mold., *Phytol. Mem.* 2: 54, 54, 96, 181, 196--198, 366, 456, 457, & 588. 1980.

Liogier describes this plant as shrubby, 1.5 m. tall, branched from the base, with blue "flowers" [corollas], and found it naturalized in thickets near the seashore in the Dominican Republic, flowering in November.

Additional citations: HISPANIOLA: Dominican Republic: A. H. Liogier 16870 (N).

VITEX AGNUS-CASTUS var. *DIVERSIFOLIA* (Carr.) Schelle

Additional bibliography: Poir. in Lam., *Tabl. Encycl. Méth. Bot.* 3: pl. 541, fig. 2. 1819; Mold., *Phytologia* 44: 338 & 342. 1979; Mold., *Phytol. Mem.* 2: 366, 456, 458, & 588. 1980.

Additional illustrations: Poir. in Lam., *Tabl. Encycl. Méth. Bot.* 3: pl. 541, fig. 2. 1819.

VITEX AGNUS-CASTUS f. *LATIFOLIA* (Mill.) Rehd.

Additional & emended bibliography: Loud., *Hort. Brit.*, ed. 1, 246 (1830) and ed. 2, 246. 1832; G. Don in Loud., *Hort. Brit.*, ed. 3, 246. 1839; G. Don in Sweet, *Hort. Brit.*, ed. 3, 551. 1839; Mold., *Phytologia* 44: 338, 339, & 342--344. 1979; Mold., *Phytol. Mem.* 2: 19, 21, 43, 195--199, 254, 255, 366, 369, 456, 457, & 588. 1980.

Additional citations: CULTIVATED: North Carolina: J. F. Matthews s.n. [July 1, 1974] (Ne--114122).

VITEX AGNUS-CASTUS var. *PSEUDO-NEGUNDO* Hausskn.

Additional bibliography: Mold., *Phytologia* 45: 480. 1980; Mold., *Phytol. Mem.* 2: 198, 200, 254--256, 366, 456--459, & 588. 1980.

Recent collectors have encountered this plant in dry riverbeds in deserts and semideserts, at 2700 feet altitude, describing it as 1 m. tall. The corollas are said to have been "blue" on Andersen & Petersen 443.

Additional citations: AFGHANISTAN: Andersen & Petersen 443 (Go); Noel 30 (Go).

VITEX ALTISSIMA L. f.

Additional synonymy: *Vitex altissima* f. *altissima* Mold. ex Jayasuriya, *Stud. Fl. Ecol. Ritig.* 197. 1980.

Additional & emended bibliography: Roxb., *Hort. Beng.*, imp. 1, 46. 1814; Loud., *Hort. Brit.*, ed. 1, 246 (1830) and ed. 2, 246. 1832; Roxb., *Fl. Ind.*, ed. 2, imp. 1, 3: 71--72. 1832; G. Don in Sweet, *Hort. Brit.*, ed. 3, 551. 1839; Roxb., *Fl. Ind.*, ed. 2, imp. 2, 482. 1874; Naves & Fern.-Villar in Blanco, *Fl. Filip.*, ed. 3, 6: pl. 227 (1878) and ed. 3, 4: 160. 1880; Roxb., *Fl. Ind.*, ed. 2, imp. 3, 482. 1971; Jayasuriya, *Stud. Fl. Ecol. Ritig.* 197--198.

1980; Mold., *Phytol. Mem.* 2: 265, 269, 271, 290, 318, 327, 366, 422, 456, 459, 460, & 588. 1980; Mold., *Phytologia* 45: 480. 1980; Roxb., *Hort. Beng.*, imp. 2, 46. 1980.

Additional illustrations: Naves & Fern.-Villar in *Blanco*, Fl. Filip., ed. 3, 6: pl. 227. 1878.

Jayasuriya (1980) describes this species as a small to large, deciduous, stocky tree, the trunk to 1.6 m. in diameter at breast height, frequent in all the lowlands of Sri Lanka, flowering from June to October, and called "kaha milla", "milla", "miyan-milla", and "niyan milla". He cites *Huber* 403 and *Jayasuriya* 1262 from Sri Lanka.

VITEX ALTISSIMA f. *JUV.* (*Willd.*) Mold.

Additional & emended bibliography: Roxb., *Hort. Beng.*, imp. 1, 46. 1814; G. Don in *Sweet*, *Hort. Brit.*, ed. 3, 551. 1839; Mold., *Phytologia* 45: 480. 1980; Mold., *Phytol. Mem.* 2: 265, 269, 318, 366, 457, 460, & 588. 1980; Roxb., *Hort. Beng.*, imp. 2, 46. 1980.

Ripley refers to this plant as a "common tree" in sandy soil, at 61 m. altitude, and his collection was gathered as voucher in primate studies conducted by him in Sri Lanka. It consists of sapling (sterile) leaves on which the petiolar wings are just as narrow as they are on *Nooteboom* 3204, which is in fruit.

Additional citations: SRI LANKA: *Ripley* 246 (W--2942594).

VITEX ALTISSIMA f. *SUBGLABRA* Thwaites

Additional bibliography: Mold., *Phytologia* 45: 480. 1980; Mold., *Phytol. Mem.* 2: 269, 366, 457, & 588. 1980.

Recent collectors describe this plant as a tree, 15--30 m. tall, the trunk 20--40 cm. in diameter at breast height, and encountered it in primary and wet evergreen forests and the edges of rainforests, at 150--900 m. altitude, flowering from August to October, and fruiting from September to November.

The corollas are said to have been "lavender" on *Huber* 345 & 403, "pale-violet" on *Kostermans* 26727, and "blue" on *Nooteboom* 3204 and *Nooteboom* & *Huber* 3153. *Nooteboom* 3204 exhibits leaves whose petioles have definite narrow wings although the specimen bears immature green fruit. On *Kostermans* 26727 some of the leaves are galled. *Kostermans* reports the species "very common" in rather dry valleys, while *Nooteboom* notes that its wood is "firstclass for window-frames". The reported local name for the tree is "mille".

Additional citations: SRI LANKA: *Huber* 345 (W--2941747), 403 (W--2941670); *Kostermans* 26727 (W--2868166), 27150 (Ac); *Nooteboom* 3204 (W--2890921); *Nooteboom* & *Huber* 3153 (W--2832979).

VITEX AMBONIENSIS Gürke

Additional bibliography: Bally, *Kew Bull. Misc. Inf.* 1937: 24. 1937; Mold., *Phytologia* 44: 385--386 & 390 (1979) and 45: 480. 1980; Mold., *Phytol. Mem.* 2: 224, 228, 231, 234, 236, 238, 241, 246, 366, & 588. 1980.

Bally (1937) records the vernacular name, "mtalali", for this species and asserts that the whole plant is used by the Swahili

to make an antidote for snakebite venom.

VITEX BOGALENSIS Wernham

Additional bibliography: Mold., *Phytologia* 44: 391--392. 1979; Mold., *Phytol. Mem.* 2: 214 & 588. 1980.

Additional citations: CAMEROONS: Talbot 1046 [Mo. Bot. Gard. photo A.856 in part] (Go--photo of type, Z--photo of type).

VITEX BULUSANENSIS Elm.

Additional bibliography: Mold., *Phytologia* 44: 393 (1979) and 46: 466. 1980; Mold., *Phytol. Mem.* 2: 309 & 589. 1980.

It seems very probable that, when more material is available, this taxon may prove to be a member of the genus *Teijsmanniodendron*.

VITEX CAESPIOSA Exell

Additional bibliography: Mold., *Phytologia* 44: 394--395. 1979; Mold., *Phytol. Mem.* 2: 234 & 589. 1980.

Additional citations: ANGOLA: Luanda: Gossweiler 3302 [Mo. Bot. Gard. photo A.8571] (Go--photo of type, Z--photo of type).

VITEX CALOTHYRSA Sandw.

Additional bibliography: Mold., *Phytologia* 45: 481. 1980; Mold., *Phytol. Mem.* 2: 121, 123, 125, 171, 457, & 589. 1980.

Recent collectors describe this plant as a tree, 3--15 m. tall, and have encountered it in forests, at 120 m. altitude, in flower in April and July, and in immature green fruit in July. The corollas on Liesner 6985 are described as having been "white with a bluish tint and with a yellow patch on the lower lip" and on Alencar 575 as "rose, the buds lilac".

Material of this species has been misidentified and distributed in some herbaria as *Bignoniaceae*.

Additional citations: BRAZIL: Amazônas: Alencar 575 (Ld, N), 576 (Ld, N); Liesner 6985 (Ld).

VITEX CANESCENS Kurz

Additional & emended bibliography: Fletcher, *Kew Bull. Misc. Inf.* 1938: 405, 431, & 433--434. 1938; Mold., *Phytologia* 44: 395--396. 1979; Mold., *Phytol. Mem.* 2: 266, 274, 280, 282, 287, 289, 290, 294, 327, 366, 458, & 589. 1980.

VITEX CAPITATA Vahl

Additional & emended bibliography: G. Don in *Sweet, Hort. Brit.*, ed. 3, 551. 1839; Mold., *Phytologia* 45: 481 (1980) and 46: 35. 1980; Mold., *Phytol. Mem.* 2: 104, 112, 121, 125, 171, 366, 430, 457, 460, & 589. 1980.

Recent collectors describe this species as a shrub, 2 m. tall, or a tree, 4--6 m. tall, the flowers visited by numerous bees, the mature fruit red, and have found it growing in disturbed sandy soil, at 140--900 m. altitude, flowering in February and April, in fruit in March. The corollas are said to have been "blue" on Gentry & al. 11148 and "blue with white nectar-guides" on Davidse & González 15628.

[to be continued]